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REMARKS

Receipt is acknowledged of the Office Action of June 12, 2002. Claims 1-9, 12-17 and 20-25 are currently pending in the application, claims 10, 11, 18, and 19 having been previously cancelled and Claims 20-25 having been added by the present Response. Claims 1-9, 12-17 have been rejected in the Office Action. Applicants added Claims 20-25 to claim specific benefits of the present invention. No new matter has been added. Favorable reconsideration of this application as amended is respectfully requested.

In the Office Action, Claims 1-9 and 12-17 were rejected under 35 U.S.C. §103(a), as being unpatentable over Murakami et al. (U.S. Patent No. 5,030,017) alone or in view of EPO 592 195. Applicants respectfully disagree with the Examiner as discussed further below.

As claimed in independent Claims 1, 6 and 7 of the present Application, the present invention relates to an anti-friction bearing for a rotary support section of a computer peripheral device wherein at least one bearing component is made of martensitic stainless steel composed of 0.60 to 0.75 % by weight carbon, 10.5 to 13.5 % by weight chromium, 1.0 % by weight or less silicon, 0.3 to 0.8 % by weight manganese, the remainder of the composition being iron and inevitably introduced impurities, containing eutectic carbide particles of 10 μ m or less in diameter, having titanium and oxygen concentrations of 10 ppm or less respectively, having a hardness of HRC 58 or higher, and having more than 0% and less than 10 % by volume retained austenite.

In the Office Action, the Examiner indicated that with respect to claims 1, 6, and 7, Murakami discloses a rolling bearing comprising a steel alloy consisting essentially of carbon,

chromium, silicon, manganese, oxygen, titanium and balance iron in ranges which overlap the claimed ranges. The Examiner indicated, however, that Murakami does not disclose the claimed range of retained austenite (i.e., less than 10% by volume of retained austenite). Instead, Murakami discloses a range of 10-25% by volume of retained austenite. The Examiner, however, believes that the ranges are "close enough so that one of ordinary skill in the art at the time of the invention was made would have expected these steels to have the same properties."

In response to the Examiner's rejection and in accordance with the Manual of Patent Examining Procedure ("MPEP"), Applicants submit herewith a Declaration Under 37 C.F.R. §1.132 to establish that anti-friction bearing including a claimed composition has unexpected and superior properties of reduced noise and vibration. Applicants further added new Claims 20-25 to more particularly claim these improved features of the invention. However, Applicants believe that, since these improved properties are inherent in the composition claimed in the independent claims, it is not required to add the limitations of improved characteristics to these independent claims.

As can be clearly seen from the attached Declaration, Anderon noise values, acceleration value (G value) of the vibration, and levels of sound pressure measured for the bearings constructed in accordance with the presently claimed invention are significantly superior than the same characteristics of anti-friction bearings having more than 10% by volume of retained austenite. Specifically, Anderon noise values were compared for bearings claimed in the present Application and bearings disclosed in the Murakami reference. It is shown that the anti-friction bearing having less than 10% by volume of retained austenite result in significant improvement of the Anderon value. Therefore, the difference between the quantity of retained

austenite in the claimed anti-friction bearing and in the prior art bearing results in a significant and unexpected improvement in vibration and noise characteristics of the resulting bearing.

Additionally, where the proposed modification would render the prior art invention unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. In re Gordon, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984).

In accordance with the disclosure of the Murakami reference, the object of its invention is to improve the longevity of rolling bearings used in transmissions and engines. See e.g., column 2, lines 1-3. To achieve this object, Murakami provides a rolling bearing including races and a rolling element, characterized in that at least one of the races and the rolling element is made of an alloy steel, which is then carburized or carbonitrided, a content of fine carbide in the surface layer of one of the races and rolling element is 20-50 % by volume and the content of retained austenite in the surface layer is 10-25 % by volume. See e.g., column 2, lines 6-13. The disclosure further indicates that if the level of retained austenite is below 10 % by volume, the longevity of the rolling bearing is decreased (see column 6, lines 28-31). Therefore, in order to achieve the specified object of the Murakami invention, the content of the retained austenite in the surface layer has to be kept 10-25 vol %. (See *id.*). Thus, the modification proposed by the Examiner would render the prior art unsatisfactory for its intended purpose.

Moreover, Murakami does not disclose an anti-friction bearing for a rotary support section of a computer peripheral device. Instead, Murakami discloses ball bearings for use in automobiles which are typically larger in size than bearings for computer devices. More importantly, bearings used in automobiles do not require reduction in noise during their operation. Computer peripheral devices, by contrast, have a low noise requirement of operation.

Based on the above arguments and the evidence disclosed in the enclosed Declaration, claims 1, 6 and 7 are patentable over the Murakami reference because the anti-friction bearing disclosed and claimed in the present application has superior and unexpected results as compared to a bearing disclosed in Murakami. Moreover, Murakami can not be modified to meet the limitation of " having more than 0% and less than 10 % by volume retained austenite" because the proposed modification would render the prior art anti-friction bearing unsatisfactory for its intended purpose.

Applicants respectfully submit that dependent claims 2-5, 8, 9, 12-17 and 20-25 are likewise believed to define patentable subject matter in view of their dependency upon allowable claims 1, 6 and 7 and, further, on their own merits.

Moreover, none of the other references cited by the Examiner discloses the limitation of " having more than 0% and less than 10 % by volume retained austenite," as is required by the presently claimed invention.

The Examiner further rejected claims 1- 9 and 12-17 under 35 U.S.C. 103(a) as being unpatentable over Obara et al (U.S. Patent No.5,843,369) in view of Murakami et al. As discussed above, claims 1-9, 12-17 and 20-25 are patentable over the Murakami reference because the anti-friction bearing disclosed and claimed in the present application has superior and unexpected results as compared to a bearing disclosed in Murakami. Therefore,

The Examiner further rejected claims 1-9 and 12-17 under the judiciary created doctrine of obviousness-type double-patenting as being unpatentable over Obara et al (U.S. Patent No.5,843,369) in view of Murakami et al. Applicants submit a Terminal Disclaimer to overcome this rejection.

Thus, claims 1, 6, and 7 are believed to be patentable over the cited prior art.

Applicants respectfully submit that dependent claims 2-5, 8, 9, 12-17 and 20-25 are likewise believed to define patentable subject matter in view of their dependency upon allowable claims 1, 6 and 7 and, further, on their own merits.

It is respectfully submitted that claims 1-9, 12-17 and 20-25, as presented, patentably define over the prior art of record. Accordingly, this Application is believed to be in a condition for allowance. Prompt and favorable action is earnestly solicited and believed to be fully warranted.

Respectfully submitted,

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